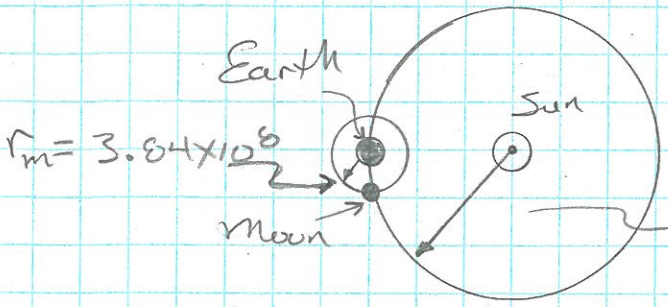


Masses: $M_S = 1.99 \times 10^{30}$ kg
$M_E = 5.98 \times 10^{24}$ kg
$M_m = 7.36 \times 10^{22}$ kg

} see the back flap of your text.

$$F_{\text{Sun on moon}} = \frac{G M_S M_m}{r_E^2}$$

$$F_{\text{Earth on moon}} = \frac{G M_E M_m}{r_m^2}$$

$$\therefore \frac{F_{\text{sun on moon}}}{F_{\text{Earth on moon}}} = \frac{G M_S M_m}{r_E^2} \cdot \frac{r_m^2}{G M_E M_m}$$

$$= \frac{M_S}{M_E} \left( \frac{r_m}{r_E} \right)^2$$

$$= 2.181$$